

282266

STATE OF SOUTH CAROLINA

(Caption of Case)

Application of Duke Energy Carolinas, LLC for
Adjustments in Electric Rate Schedules and Tariffs

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PSC SC
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BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

COVER SHEET

DOCKET

NUMBER: 2018 - 319 - E

(Please type or print)

Submitted by: Hasala Dharmawardena

SC Bar Number:

Address: 145 Cochran Road Unit 4

Telephone: 8642070655

Clemson SC 29631

Fax:

Other:

Email: hasala@ieee.org

NOTE: The cover sheet and information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is required for use by the Public Service Commission of South Carolina for the purpose of docketing and must be filled out completely.

DOCKETING INFORMATION (Check all that apply)

☐ Emergency Relief demanded in petition

☐ Request for item to be placed on Commission's Agenda expeditiously

☐ Other:

| INDUSTRY (Check one) | NATURE OF ACTION (Check all that apply) | | | |
|--|--|--|--|--|
| <input checked="" type="checkbox"/> Electric | <input type="checkbox"/> Affidavit | <input type="checkbox"/> Letter | <input type="checkbox"/> Request | |
| <input type="checkbox"/> Electric/Gas | <input type="checkbox"/> Agreement | <input type="checkbox"/> Memorandum | <input type="checkbox"/> Request for Certification | |
| <input type="checkbox"/> Electric/Telecommunications | <input type="checkbox"/> Answer | <input type="checkbox"/> Motion | <input type="checkbox"/> Request for Investigation | |
| <input type="checkbox"/> Electric/Water | <input type="checkbox"/> Appellate Review | <input type="checkbox"/> Objection | <input type="checkbox"/> Resale Agreement | |
| <input type="checkbox"/> Electric/Water/Telecom. | <input type="checkbox"/> Application | <input type="checkbox"/> Petition | <input type="checkbox"/> Resale Amendment | |
| <input type="checkbox"/> Electric/Water/Sewer | <input type="checkbox"/> Brief | <input type="checkbox"/> Petition for Reconsideration | <input type="checkbox"/> Reservation Letter | |
| <input type="checkbox"/> Gas | <input type="checkbox"/> Certificate | <input type="checkbox"/> Petition for Rulemaking | <input type="checkbox"/> Response | |
| <input type="checkbox"/> Railroad | <input type="checkbox"/> Comments | <input type="checkbox"/> Petition for Rule to Show Cause | <input type="checkbox"/> Response to Discovery | |
| <input type="checkbox"/> Sewer | <input type="checkbox"/> Complaint | <input type="checkbox"/> Petition to Intervene | <input type="checkbox"/> Return to Petition | |
| <input type="checkbox"/> Telecommunications | <input type="checkbox"/> Consent Order | <input type="checkbox"/> Petition to Intervene Out of Time | <input type="checkbox"/> Stipulation | |
| <input type="checkbox"/> Transportation | <input type="checkbox"/> Discovery | <input checked="" type="checkbox"/> Prefiled Testimony | <input type="checkbox"/> Subpoena | |
| <input type="checkbox"/> Water | <input type="checkbox"/> Exhibit | <input type="checkbox"/> Promotion | <input type="checkbox"/> Tariff | |
| <input type="checkbox"/> Water/Sewer | <input type="checkbox"/> Expedited Consideration | <input type="checkbox"/> Proposed Order | <input type="checkbox"/> Other: | |
| <input type="checkbox"/> Administrative Matter | <input type="checkbox"/> Interconnection Agreement | <input type="checkbox"/> Protest | | |
| <input type="checkbox"/> Other: | <input type="checkbox"/> Interconnection Amendment | <input type="checkbox"/> Publisher's Affidavit | | |
| | <input type="checkbox"/> Late-Filed Exhibit | <input type="checkbox"/> Report | | |

Print Form

Reset Form

Duke, Daphne

From: Easterling, Deborah
Sent: Tuesday, February 26, 2019 3:38 PM
To: Duke, Daphne; Boyd, Jocelyn
Subject: FW: DEC Rate Case - Testimony by Intervener Hasala Dharmawardena
Attachments: Intervenor Hasala Dharmawardena Testimony PSC DEC 2019.pdf; Prefiled Testimony Hasala Dharmawardena Cover Sheet.pdf

From: Hasala Dharmawardena <hasala@ieee.org>
Sent: Tuesday, February 26, 2019 3:28 PM
To: PSC_Contact <Contact@psc.sc.gov>
Cc: Heather Smith <heather.smith@duke-energy.com>; Pittman, Jenny <jpittman@ors.sc.gov>; Hammonds, Lessie <lhammonds@ors.sc.gov>; Nelson, Jeff <jnelson@ors.sc.gov>; fellerbe@robinsongray.com; Hamm, Steven <shamm@ors.sc.gov>; Dover, Becky <BDover@scconsumer.gov>; Grube-Lybarker, Carri <clybarker@scconsumer.gov>; john.burnett@duke-energy.com; molly.jagannathan@troutman.com; sroberts@spilmanlaw.com; charris@spilmanlaw.com; dwilliamson@spilmanlaw.com; thad@votesolar.org; bdurant@sowelldurant.com; alex@shissiaslawfirm.com; bguild@mingspring.com; Richard Whitt <rlwhitt@austinrogerspa.com>; Richard Whitt <rlwhitt@austinrogerspa.com>; Scott Elliott <sellott@elliottlaw.us>; sferguson@selcsc.org; sferguson@selcsc.org; sferguson@selcsc.org; len.anthony1@gmail.com
Subject: DEC Rate Case - Testimony by Intervener Hasala Dharmawardena

Dear PSC,

Please find my testimony, in my role as an intervener in the DEC rate case, attached herewith.
 Thank You very much!

Best Regards,
Hasala Dharmawardena,
 Chair | IEEE Piedmont Section PES Society Chapter
 Vice President Education | Clemson Toastmasters
 +1 864 207 0655

Case: Docket 2018-319-E

Intervener: Hasala Dharmawardena

Date Submitted: 2/26/2019

My name is Hasala Dharmawardena, I am a 3rd year Phd student at the Clemson University and my personal address is 145 Cochran Road Unit 4, Clemson.

I hold a BSc (2010) and MSc (2015) in Electrical Power Engineering from the University of Moratuwa, Sri Lanka and Norwegian University of Science and Technology, Norway. I have been a public activist in Energy Policy and have presented at two public hearings conducted by the Public Utilities Commission of Sri Lanka (2011-2017).

I am providing my testimony as a customer of Duke Energy, power engineer and an energy policy activist. I am technology neutral and my motive is goodwill towards the rate paying public (including myself) as well as the utility providing the service.

Summary

The testimony has two main requests. The first is to continue with the current tariff structure for residential customers and the second is to create a signal/incentive for the utility to be 'more' accountable for their decisions. The points reflect one to one to the original DEC application (given [here](#)).

Request to continue with current tariff structure

The efforts of the utility to push towards a more cost-reflective tariff is appreciated. I do strongly agree with this principle. DEC has strongly argued for this increase as seen by the statement of SC Duke Energy President in [0].

This testimony shows that the lines are not as clearly drawn or clear cut as expressed by the honorable President of DEC, SC. It is never possible to have a "*charge that is completely fair to every customer*" due to the nature of this industry, and the best we can strive for, is to be as fair as 'possible'. For example, the real cost to supply a customer connected near the feeder head and a customer at the very end of a rural feeder (Say Clemson) will have a large difference, even though they pay the same charges.

The suggested costing technique by witness Hager does make a clear accounting case where all the ledgers add up and everything is based on a mathematically justifiable accounting framework. In reality, it is a case of judgement and opinion as to who is responsible for the capital cost of the distribution system. Arguments as shown below, can be made which refutes the clear-cut statement that the 'capital cost of the distribution network **must** be attributed to a fixed cost for each customer, to ensure that the tariff is cost-reflective'. It is my opinion that allocating the capital cost based on minimum system size principle is flawed for the case provided by witness Hager.

Let us first define what a fixed charge is (synonymous with Basic Facilities Charge – BFC). A fixed cost pertaining to this scenario is a charge that covers a cost, which is **directly proportional to the number of users**. Let us look at this issue using a hypothetical distribution feeder that serves N number of customers, is L miles long and system capital cost is \$ C. Now let us assume that 9N number of new customers now connect to the same feeder. Does the new minimum size become \$ 10C? If the cost is 10N then it is clearly

a fixed cost that is proportional to the number of customers and the request by DEC stands on fair grounds. Unfortunately, it is clear that whereas the number of customers have changed, the total cost has remained unchanged. Therefore, It cannot be indisputably stated that this is a fixed charge that is proportional to the number of customers connected to the system.

Unlike a private installation, a utility infrastructure is not built to serve a particular (specific and unique) customer. The reality is that the infrastructure was not created for the profit of a single specific user or a set of specific users. The users connect to an already existing infrastructure which would have existed even if the marginal user did not exist. This is the reason for the weakness in the suggested method. In my humble opinion, the argument is not strong enough to use this suggested costing method, to include the capital cost in the BFC especially since if approved it will have drastic and long term socio-economic impacts (Refer witness statement of Dr. Ruoff). As given in the standard text [1] it is an 'unallocable portion of total cost'. I propose that the rate structure and cost components not to be changed.

Further points that deter any change in the existing tariff structure is that the proposed change will impact stability principle, as well as the equity principle as given in the well-known principles for setting power tariffs [2]. The new price signal will also not encourage energy conservation resulting in the energy usage and capacity requirements to increase, which could result in unforeseen congestion increase in the network.

Note that efficient distribution tariffs should be designed to send long-term incremental cost signals to consumers. Therefore, **if the decision is taken to accept the application of DEC to increase fixed charge to \$ 28, it is requested to take the change smoothly across a 10-year period (Annual increase of ~2 \$ say) to ensure equity and stability in the tariff.**

Incentivizing efficient investment - Infrastructure cost efficiency

The rate case request is passing through costs for CCR, Nuclear Power plant stoppage, IT infrastructure upgrading, grid improvement and many others. Some costs were from past decision taken and some are for the future. What is the mechanism which makes the utility take the best decision? What is the incentive to minimize these undesirable situations from recurring? One way to create an incentive for the utility to take the best decision is to make the utility have a stake in the decision, where a certain amount of the investments for the suggested improvements are funded by the utility capital.

Compliance costs related to CCR (Point 15/17/20/48)

This has many implications, the first being that the generation mix, at that point of time, might have been different if this compliance cost was included in the IRP. It is understood that decisions had to be made based on information available at that point of time and all the future situation are not under the control of the utility. However, a certain portion of the costs (however small, say 5%) can be borne by the utility. This measure will act as an incentive to promote farsighted decision making in the future. The same applies to the Lee Nuclear project costs, as well as the requested additional reserve for end of life for nuclear plants.

With regard to the generation mix, these cost overruns has distorted the level playing field for the generation technology, which could have resulted in a non-optimal energy mix.

Build cleaner, more reliable smarter energy future (Point 16)

It is reasonable to include the PV power plants w to comply with government policy, or because they were chosen by the optimization program in the IRP due to cost minimization. However, if not, it is suggested that the utility justify showing the improvements in the quality of supply giving the expected improvements to QoS indicators such as FOR/SAIFI and SADI. The factors such as cleaner (less Sox/NOx, CO2) can be quantified and included in the IRP program rather than including them as qualitative terms.

Costs related to new CIS (Point 18/19)

The witness understands that requirements stated in point 18/19 are important and that utility request is driven by the need to make the tariff **more cost reflective**. It is suggested that the utility show more intent in its present operation to show **current costs** and encouraging customer awareness using the technologies available at hand.

For example, it is noted that the current bill of the customer, shown in Figure 1, has no breakdown of cost. Usage and flat fees are combined on Duke Energy's bills, rendering the basic facilities charge invisible to consumers. Breakdown of cost refers to giving the specific fixed cost, cost per kWh and more advanced details, such as cost for distribution, transmission, generation (unbundled costs). It is recommended to ensure smoothness in the transition. As a first step, the utility can start by including these important details in the current bill without waiting for the new CIS system, since these changes are trivial. This will help users understand how their usage affects the total bill, encouraging conservation.

On the user protection side, it is important to assure that tariffs are able to provide clear information on each cost component.

| Service From: JAN 02 to FEB 01 (30 Days) | | | Your next scheduled meter reading will occur between MAR 01 and MAR 06 | | |
|--|-------------------------------------|--------------------|--|------------------------------------|--------------|
| PREVIOUS BILL AMOUNT | PAYMENTS (-) | NEW CHARGES (+) | ADJUSTMENTS (+ OR -) | AMOUNT DUE (=) | |
| \$43.88 | \$43.88 | \$63.63 | \$0.00 | \$63.63 | |
| METER NUMBER | METER READINGS: PREVIOUS PRESENT | MULTI- PLIER | TOTAL USAGE | RATE SCHEDULE DESCRIPTION | AMOUNT |
| | | 1 | 537 KWH | RE - Residential Srv, All Electric | 59.71 |
| | | | | Fixed Monthly Leaf 50C Charge | .89 |
| | | | | Municipal Fee | 3.03 |
| | | | | Amount Due | 63.63 |

| Electricity Usage | This Month | Last Year |
|-------------------|------------|-----------|
| Total KWH | 537 | 344 |
| Days | 30 | 30 |
| AVG KWH per Day | 18 | 11 |
| AVG Cost per Day | \$1.99 | \$1.33 |

| |
|---|
| Our records indicate your telephone number is 777-777-7777. If this is incorrect, please follow the instructions on the back of the bill. |
| A late payment charge of 1.5 % will be added to any past due utility balance not paid within 25 days of the bill date. |


| | |
|--|--|
|  | Have concerns about a possible environmental or regulatory violation involving Duke Energy? You can report it anonymously 24/7 at 1-855-355-7042 or at duke-energy-env.alertline.com |
|--|--|

Figure 1 Sample Residential Bill - Does not include the fixed cost or the cost breakdown

Grid Improvement Plan (points 35 to 42)

The work done by the utility, with regard to grid improvement, is admirable. Adding to the plan, it is recommended to include quantifiable targets that are meant to be achieved by executing the proposed grid improvement plan. For example, targeted improvement of reliability via SAIFI and SAIDI/ FOR indicators, target for average MTTR (Speed of restoration), from current values to expected improvement. It is also requested to include the quantifiable benefits for the case made towards expanding Solar and other innovative technologies. For some of these grid investments, a stake in capital should be borne by the decision maker/utility to operate as an incentive to encourage optimum decision-making. For these extra 'risks' the utility should also be able to get the corresponding (or larger) share of the profits.

References ('points' refer to DEC application numbers as [at this link](#))

[0] <https://www.greenvilleonline.com/story/opinion/2019/02/10/opinion-why-duke-seeking-hike-s-c-fixed-basic-facilities-fee/2794505002/>

[1] Principles of Public Utility Rates by James C. Bonbright

[2] Study on tariff design for distribution systems Final Report Prepared for: DIRECTORATE-GENERAL FOR ENERGY DIRECTORATE B – Internal Energy Market EU 28 January 2015 - Available at: <https://ec.europa.eu/energy/sites/ener/files/documents/20150313%20Tariff%20report%20final revREF-E.PDF>